REMARKS

Drawings

The Examiner suggests that Figure 3 should be designated by a legend such as -- Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Applicants appreciate the Examiner's observations and have provided a corrected drawing to address the Examiner's concerns.

Specification

The Examiner has objected to the Abstract. The Examiner states:

> "Applicant is reminded of the proper language and format for an abstract of the disclosure. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc."

Applicants appreciate the Examiner's observations and has amended the Abstract accordingly.

With regard to Detailed Action Item 4

The Examiner appears to have objected to the specification, however no clear objection has been provided. As such Applicants have not provided any additional comment and respectfully request that the Examiner clarify the objection if there is one.

Claim Disposition

Claims 1 – 88 are pending in the application. Claims 1 – 88 have been rejected. Claims 1 – 8, 11, 12, 13, 19, 20, 23 – 30, 34, 35, 41, 42, 45 – 52, 56, 57, 63, 64, 67 – 74, 78, 79, 85, and 86 have been amended.

Claim Rejections -35 USC §112

Claims 1-88 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

> "Claim 23 appears to require the limitation of a blank that machines a coordinate system into an actual part. The examiner respectfully submits that the instant specification fails to provide enablement for a blank that machines a coordinate system into an actual part. One of ordinary skill in the art would not know how a blank would machine a coordinate system into an actual part."
>
> "Claims 1, 45, and 67 appear to require the limitation of a selection of a blank establishing a coordinate system. The Examiner respectfully submits that the instant specification fails to provide enablement for the selection of a blank establishing a coordinate system. One of ordinary skill in the art would not know how the selection of a blank would establish a coordinate system."

Applicants appreciate the Examiner's observations and have amended Claims 1, 23, 45, and 67 accordingly to address the Examiner's concerns.

Claims 4, 6, 8-10, 18-20, 26, 28, 30, 32, 40-42, 46, 48, 50, 62-64, 68, 70, 72, 74, and 84-86, stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner states:

> "Claim 4 recites the limitation that "said associative relationship is a parent/child relationship", however claim 3, from which claim 4 depends, recites the limitation of "an associative relationship", and claim 1, from which claim 4 depends, recites the limitation of "an associative relationship". Therefore, it is not clear which associative relationship is "said associative relationship"."
>
> "Claim 6 recites the limitation that "said associative relationship is a parent/child relationship", however claim 5, from which claim 6 depends, recites the limitation of "an associative relationship", and claim 1, from which claim 5 depends, recites the limitation of "an associative relationship". Therefore, it is not clear which associative relationship is "said associative relationship"."
>
> "Claim 8 recites the limitation that "said associative relationship is a parent/child relationship", however claim 7, from which claim 8 depends,

recites the limitation of "an associative relationship", and claim 1, from which claim 7 depends, recites the limitation of "an associative relationship". Therefore, it is not clear which associative relationship is "said associative relationship"."

"Claim 20 recites the limitation that "said associative relationship is a parent/child relationship", however claim 19, from which claim 20 depends, recites the limitation of "an associative relationship", and claim 1, from which claim 19 depends, recites the limitation of "an associative relationship". Therefore, it is not clear which associative relationship is "said associative relationship"."

"Dependent claims 26, 28, 30, 42, 46, 48, 50, 64, 68, 70, 72, 74, and 86 recite the same indefinite terminology with respect to the term "an associative relationship", and therefore, are also indefinite. Namely, which associative relationship is "said associative relationship"."

"Claims 9, 10, 32, recite the limitations "said master product and process model" in line 2. Claims 18, 40, 62, and 84 recite the limitations "said manufacturing instructions" in lines 1-2."

"Claims 19, 41, 63, and 85 recite the limitations "said product drawings" in lines 1-2. There is insufficient antecedent basis for these limitation(s) in the claim(s)."

Applicants appreciate the Examiner's observations and have amended the Claims 4, 6, 8, 11 – 13, 19, 20, 23 - 30, 30, 34, 35, 41, 42, 45 – 52, 56, 57, 63, 64, 67 – 74, 78, 79, 85, and 86 accordingly to address the Examiner's concerns.

Claim Rejections -35 USC §101

Claims 67-88 stand rejected under 35 U.S.C. §101 allegedly because the claimed invention is directed to non-statutory subject matter. Applicants respectfully traverse. The Examiner states:

"Referring to claims 67-88, the data signal is not tangibly embodied in a medium. Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

Applicants appreciate the Examiner's observations and have amended Claim 67 accordingly to address the Examiner's concerns.

Claim Rejections - 35 USC § 103

Claims 1-88 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,629,065 to Gadh, hereinafter referred to as Gadh, in view of U.S. Patent No. 4,928,221 to Belkhiter, hereinafter referred to as Belkhiter. Claims 1 – 20, 23 – 42, 45 – 64, and 67 - 86 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Gadh in view of U.S. Patent No. 6,430,455 to Rebello, hereinafter referred to as Rebello. Applicants respectfully traverse. The Examiner states:

> "Referring to claims 1, 23, 45, and 67, Gadh clearly teaches a method, system, part, and computer program of horizontally structured CAD/CAM manufacturing for concurrent product and process design (Fig. 55A and 55B, Col. 36, lines 28-39; Col. 8, lines 5-24), comprising:
>
> "selecting a blank for machining into an actual part establishing a coordinate system (Figs. 10A-10C and corresponding description, i.e., "rubber-banding"); creating a master product and process concurrent model (Col. 10, lines 22-58) comprising: a virtual blank corresponding to said blank (Fig. 55A, element b1); a manufacturing feature (Fig. 55A, any of elements nw or nb); virtual machining of said manufacturing feature into said virtual blank (See Fig. 55A and Col. 36, lines 28-39), said manufacturing feature exhibiting an associative relationship with said coordinate system (See Fig. 25A-25D; Col. 24, lines 6-32)."
>
> "Gadh clearly teaches a design intent graph (D) used to create a design and record the specified design constraints to be used in future design activities. Clearly, D refers to the intended/desired geometric relations between the models features (Col. 20, lines 56-65). Gadh clearly teaches exemplary embodiments of a "machined part constructed in VDSF" with its corresponding D (Col. 36, lines 28-34)."
>
> "Clearly, the D depicted above, is horizontally structured. The virtual blank is element b1, and a manufacturing feature could clearly be any of nw or nb with exclusive relationships to b1. Gadh clearly teaches elements as add-ins, wherein, as mentioned above, the figures depict "a machined part constructed in VDSF". Gadh clearly shows the manufacturing features on a grid coordinate system. Furthermore, Gadh clearly teaches a child element (which can clearly be interpreted, without question, as any of the nw or nb elements) has an associative relationship with the coordinate system. The VDSF display viewed by the user is considered as having a right-left/top-bottom/front-rear coordinate system, whereby the user issues intuitive commands for a user-viewpoint-dependent method of alignment of said child element. And, Gadh also clearly teaches that YDSF determines the XYZ coordinate axes when a viewpoint-dependent alignment command is issued (Col. 24, lines 6-32). Furthermore, Gadh teaches the representation can be implemented in any

conventional 2D-CAD systems or VR-CAD systems utilizing VE (Col. 39, lines 33-44). Examiner respectfully submits that "associative relationship" requires no further explanation and that it will be given its plain meaning as required by MPEP 2111.01. Webster's Dictionary defines associative as "of, or relating to, in association with" while relationship as "a state or character of being related... a natural or logical association between two or more things, connection."

"Referring to claims 2, 4, 6, 8, 20, 24, 26, 28, 30, 42, 46, 48, 50, 52, 64, 68, 70, 72, 74, and 86 Gadh teaches the above, wherein said associative relationship is a parent/child relationship (Col. 24, lines 6-32; Col. 40, lines 14-57). Referring to claims 3, 25, 47, 69, Gadh teaches the above, further including said manufacturing feature exhibiting an associative relationship with another said manufacturing feature (Fig. 55A). Referring to claims 5, 7, 27, 29, 49, 51, 71, 73, Gadh teaches the above, wherein said virtual blank exhibits an associative relationship with another said manufacturing feature or said coordinate system (Fig, 55A). Referring to claims 9-10, 31-32, 53-54, 75-76, Gadh teaches the above, further comprising creating extracts from said master product and process model, wherein said extracts comprise replicated models of said master product and process model at various operations of said manufacturing (Fig. 55C; Col. 10, line 54- Col. 11, line 7). Referring to claims 12-17, 34-39, 56-61, 78-83, Gadh teaches the above, wherein said virtual blank is positioned and oriented relative to said coordinate system, wherein said virtual blank is generated as a three dimensional parametric solid model from a reference set geometry, wherein said reference set geometry is defined by dimensional characteristics of a modeled part, wherein establishing said coordinate system comprises one or more datum planes, wherein said coordinate system comprises: creating a first datum plane positioned and oriented relative to a reference, creating a second datum plane positioned and oriented relative to said reference; and creating a third datum plane positioned and oriented relative to said reference, wherein said first datum plane, said second datum plane, and said third datum plane are orthogonal (Figs. 25A-D and 55A)."

"While Gadh clearly teaches creating a model and constructing a part in the VDSF, Gadh fails to provide for generating a product drawing of the actual part and generating machining instructions to create the actual part by machining the manufacturing feature into the blank."

"While the instant claims call for horizontally structured CAD/CAM manufacturing, as presented by Gadh above, the instant specification appears to describe this horizontal structure with respect to the establishment of relationships that are taught as both horizontal and vertical (See page 4-5 and 9-10 of the instant specification). Therefore, even though the Examiner interprets the claims to require at least a horizontally structured relationship in the preamble, the claims do not required any of the limitations in the body of the claims to have such a horizontal structure, exclusive, or non-exclusive CAD/CAM relationship. Namely, the claims do not require a horizontally structured CAD/CAM

relationship with respect to generating a product drawing of the actual part and generating machining instructions to create the actual part by machining the manufacturing feature into the blank."

"Furthermore, the recitation "horizontally structured CAD/CAM manufacturing" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See In re Hirao, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and Kropa v. Robie, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Clearly, the body of the claims do not depend on the preamble for completeness, in fact, applicant has admitted that the intended use of the horizontal structure is not limited by non-verticality (See pages 4-5 of the instant specification)."

"The claims, as such, do not require any functional relationship between the limitation of an associative relationship and the limitation of generating machining instructions to create the actual part by machining the manufacturing feature into the blank. Furthermore, neither the part nor blank are required to be the product."

"In view of the above, the examiner respectfully submits that patentability resides in the determination of non-obviousness with respect to generating a product drawing of the actual part, and generating machining instructions to create the actual part by machining, in real life, the manufacturing feature into the blank. The examiner respectfully submits that generating a product drawing of an actual part and generating machining instructions to create the actual part by machining, in real life, a manufacturing feature, into a blank, is commonly known in the art, and therefore, the examiner is unable to make said determination of non-obviousness at this time."

"The examiner believes these limitations are clearly taught by any of the prior art references of Belkhiter or Rebello."

"Referring to claims 1, 23, 45, and 67, Belkhiter clearly teaches analogous art, wherein a conventional CAD/CAM system is used to produce a part drawing (Col. 2, lines 53-66 of '221) and then generating machining instructions to create said actual part by machining manufacturing features into a blank (See Cols. 7-8, table 2; Col. 1, lines 6-14 of '221). Referring to claims 11, 18-19, 2 1-22, 33, 40-41, 43-44, 55, 62-63, 65-66, 77, 84-85, 87-88, Belkhiter teaches creating extracts from a master product and process model, wherein said extracts are used to generate manufacturing process sheets, wherein said product drawings include an associative relationship with said master product and process concurrent model (Col. 14, lines 6-11 of '221), wherein the master product and process concurrent model links to a process planning system, wherein said process planning system comprises automated creation of a

manufacturing process plan (Fig. 1, element 14; Col. 3, lines 24-48 of '221)."

"Referring to claims 1, 23, 45, and 67, Rebello clearly teaches analogous art, wherein figure 2 clearly shows the processing architecture of the CAD/CAM system, wherein the processor uses a data extractor and populator to populate the extracted data in drawing files and NC machining data files (Col. 3, lines 18-32 of '455), if the drawings and NC machining data are satisfactory, the designer releases them to manufacturing for production of the part (Col. 1, lines 10-18 of'455). Referring to claims 11, 18, 19, 33, 40, 41, 55, 62, 63, 77, 84, 85, Rebello teaches creating extracts from a master product and process model (Col. 4, line 63 - Col. 5, line 6 of '455), wherein said extracts are used to generate manufacturing process sheets (Col. 7, claim 19, Col. 2, lines 39-64; Fig. 3, element 26 of '455), wherein said product drawings include an associative relationship with said master product and process concurrent model (Col. 3, lines 5-17, Col. 6, lines 13-17 of '455)."

"Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to combine the teachings of either Belkhiter or Rebello with the teachings of Gadh."

"One of ordinary skill in the art would have been motivated to combine Belkhiter with Gadh because Belkhiter teaches a part program suitable for machining a part from a drawing without the need for human intervention. Furthermore, Belkhiter teaches a system that reduces lead-time between the request for a part and the machining of a part. Further still, Belkhiter teaches a system that reduces manpower costs (Cot. 1, line 62 — Col. 2, line 2 of '221)."

"One of ordinary skill in the art would have been motivated to combine Rebello with Gadh because Rebello teaches a system and method for managing files of a product in a design and manufacturing environment wherein costly mistakes are avoided and time to bring the product to market is reduced. Other advantages include discovery of inconsistencies, the ability to incorporate agility and concurrent engineering into design processes and divide roles across and between organizational structures quickly and efficiently (Col. 5, lines 37-46 of '455)."

Applicants respectfully contend that explanation in the Office Action mischaracterizes the teachings of Gadh and/or Belkhiter and Rebello and that the cited references do not teach or disclose each element of the invention. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness. *In re Fine*, U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are disclosed in the

prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

With regard to Claims 1, 23, 45, and 67 specifically, Applicants have amended these claims to further clarify that which the Applicant's consider as their invention. The amendment renders the rejection moot and Applicants respectfully contend that neither Gadh, Belkhiter, nor Rebello teach or disclose each element of the invention, whether alone or in combination. Specifically, neither Gadh, Belkhiter, nor Rebello teach or disclose, "**said form feature exhibiting a first associative relationship with said coordinate system**", or "wherein **said coordinate system is substantially independent of said base feature**; and wherein **said coordinate system is substantially independent of said virtual blank**". There is no teaching what so ever in Gadh to suggest that a form feature exhibits an associative relationship with the coordinate system. Furthermore, there is no specific teaching in Gadh to indicate that the block b_1 (treated by the examiner as Applicants' virtual blank) is substantially independent of the coordinate system. Moreover it is not possible to suggest that such a feature is inherent as it is not necessarily present in the teachings of Gadh. That is, it is not *necessarily* present in the teachings of Gadh that block b_1 is independent of the coordinate system therein. Therefore, because neither Gadh, Belkhiter, nor Rebello disclose or teach an element of the invention they cannot render Applicant's claims unpatentable.

Furthermore, neither Gadh, Belkhiter, nor Rebello teach or disclose, "**said manufacturing feature exhibiting a second associative relationship with said coordinate system**". To support the rejection he Examiner relies, on the disclosure of Gadh at Column 24, lines 6 – 32 and Figures 25A – 25D. However, it is evident from the disclosure of Gadh at the cited reference that the Examiner has mischaracterized the teachings of Gadh. There is no teaching whatsoever at the cited reference regarding the blocks e.g., b_2 and subsequent exhibiting an associative relationship with a coordinate system. In fact, Gadh teaches quite the contrary, Gadh specifically teaches a modeling

approach that is essentially the "vertical" modeling of the existing art. Gadh at the cited reference specifically teaches the addition of subsequent blocks each being positioned and placed relative to b_1, b_2 and subs. This is specifically the approach that the Applicants clearly teach to avoid as much as possible. Applicants further direct the Examiner's attention to note that Gadh clearly teaches that the associative relationships are between the blocks, and not with a coordinate system, to establish the positioning and placement in various directions. For example, Gadh at Col. 24, lines 9 – states: "FIG. 25A illustrates alignment of b_2, a child of b_1, **in a +X axis** (emphasis added) fixed on b_1....Similarly, Fig. 25B illustrates alignment of b3 **in the +X axis** (emphasis added) with its parent b2. Furthermore, Gadh specifically teaches that the VSDF "uses a **coordinate-system independent** (emphasis added), ...method of alignment" Clearly this teaches directly away from Applicants invention and claims. Therefore, because neither Gadh, Belkhiter, nor Rebello disclose or teach each element of the invention they cannot render Applicant's claims unpatentable. Thus, Claims 1, 23, 45, and 67 are allowable, the rejections are improper, and they should be withdrawn.

In view of the above discussion, Claims 2 – 22, 24 – 44, 46 – 66, and 67 - 88 depend from Claims 1, 23, 45, and 67, respectively, whether directly or indirectly, and include all of the corresponding limitations thereof. Claims 11, 23, 45, and 67 are not taught by Gadh, Belkhiter, or Rebello, therefore, Claims 2 – 22, 24 – 44, 46 – 66, and 67 - 88, cannot be taught by Gadh, Belkhiter, or Rebello either. Thus, Claims 2 – 22, 24 – 44, 46 – 66, and 67 - 88 are allowable, the rejections are improper and they should be withdrawn.

Claims l, 3, 5, 7, 9, 11, 12-19, 21, 22, 23, 25, 27, 29, 31, 33, 34-41, 43, 44, 45, 47, 49, 51, 53, 55, 56-63, 65, 66, 67, 69, 71, 73, 75, 77, 78-85, 87, 88 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,075,866 to Goto, hereinafter referred to as Goto, in view of U.S. Patent No. 4,928,221 to Belkhiter. Applicants respectfully traverse. The Examiner states:

> "Referring to claims 1, 18-19, 23, 40-41, 45, 62-63, 67, and 84-85, Goto clearly teaches a method, system, part, and computer program of CAD/CAM manufacturing for concurrent product and process design (Col. 1, lines 7-16), comprising: selecting a blank for machining into an actual part establishing a coordinate system (Fig. 13A; Col. 5,, lines 34-35; Col. 15, lines 40-42); creating a master product and process concurrent model (Col. 5, lines 12-61; Fig. 3A; Col. 15, lines 40-59) comprising: a virtual

blank corresponding to said blank (Fig. 13A; Col. 15, lines 42-43); a manufacturing feature (Col. 16, lines 3-21); virtual machining of said manufacturing feature into said virtual blank (Col. 16, lines 3-21), said manufacturing feature exhibiting an associative relationship with said coordinate system (See Figs.13); generating a product drawing of said actual part (Col. 5, lines 58-61); and generating machining instructions to create said actual part by machining said manufacturing feature into said blank (Col. 5, lines 58-61)."

"Referring to claims 3, 25, 47, 69, Goto teaches the above, further including said manufacturing feature exhibiting an associative relationship with another said manufacturing feature (Fig. 13C, s36). Referring to claims 5, 7, 27, 29, 49, 51, 71, 73, Goto teaches the above, wherein said virtual blank exhibits an associative relationship with another said manufacturing feature or said coordinate system (Fig. 13C, s40). Referring to claims 12-17, 34-39, 56-61, 78-83, Goto teaches the above, wherein said virtual blank is positioned and oriented relative to said coordinate system, wherein said virtual blank is generated as a three dimensional parametric solid model from a reference set geometry, wherein said reference set geometry is defined by dimensional characteristics of a modeled part, wherein establishing said coordinate system comprises one or more datum planes, wherein said coordinate system comprises: creating a first datum plane positioned and oriented relative to a reference, creating a second datum plane positioned and oriented relative to said reference; and creating a third datum plane positioned and oriented relative to said reference, wherein said first datum plane, said second datum plane, and said third datum plane are orthogonal (Fig. 13A, element S20)."

"Goto fails to teach CAD/CAM manufacturing that is horizontally structured. Examiner respectfully notes the arguments posed above with respect to the term "horizontally structured"."

"However, referring to claims 1, 23, 45, and 67, Belkhiter clearly teaches analogous art, wherein a conventional CAD/CAM system is used to produce a part drawing (Col. 2, lines 53-66 of '221) and then generating machining instructions to create said actual part by machining manufacturing features into a blank (See Cols. 7-8, table 2; Col. 1, lines 6-14 of '221), wherein the CAD/CAM system is horizontally structured (Fig. 10; Col. 12, lines 5-64 of '221)"

"Referring to claims 9, 11, 21-22, 31, 33, 43-44, 53, 55, 65-66, 75, 77, 87-88, Belkhiter teaches creating extracts from a master product and process model, wherein said extracts are used to generate manufacturing process sheets, wherein said product drawings include an associative relationship with said master product and process concurrent model (Col. 14, lines 6-11 of '221), wherein the master product and process concurrent model links to a process planning system, wherein said process planning system comprises automated creation of a manufacturing process plan (Fig. 1, element 14; Col. 3, lines 24-48 of '221)."

"Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to combine the teachings of Belkhiter with the teachings of Goto."

"One of ordinary skill in the art would have been motivated to combine Belkhiter with Goto because Belkhiter teaches a part program suitable for machining a part from a drawing without the need for human intervention. Furthermore, Belkhiter teaches a system that reduces lead-time between the request for a part and the machining of a part. Further still, Belkhiter teaches a system that reduces manpower costs (Col. 1, line 62 — Col. 2, line 2 of '221)."

With regard to Claims 1, 23, 45, and 67 specifically, Applicants have amended these claims to further clarify that which the Applicant's consider as their invention. The amendment renders the rejection moot and Applicants respectfully contend that neither Goto, Belkhiter, nor Rebello teach or disclose each element of the invention, whether alone or in combination. Specifically, neither Goto, Belkhiter, nor Rebello teach or disclose, "**said form feature exhibiting a first associative relationship with said coordinate system**", or "wherein **said coordinate system is substantially independent of said base feature**; and wherein **said coordinate system is substantially independent of said virtual blank**". There is no teaching what so ever in Goto, Belkhiter, or Rebello to suggest that a form feature exhibits an associative relationship with the coordinate system. Therefore, because neither Goto, Belkhiter, nor Rebello disclose or teach an element of the invention they cannot render Applicant's claims unpatentable.

Furthermore, neither Goto, Belkhiter, nor Rebello teach or disclose, "**said manufacturing feature exhibiting a second associative relationship with said coordinate system**". To support the rejection he Examiner relies, on Figure 13 of Goto. However, it is evident from the disclosure of Goto at the cited reference (Figure 13) that the Examiner has mischaracterized the teachings of Goto. Looking to the teachings of Goto regarding Figure 13, at Col. 15, lines 34 – 66, there is no teaching whatsoever at the cited reference regarding the manufacturing feature exhibiting a first associative relationship with said coordinate system. In fact, there is no mention what so ever of the coordinate system depicted in the figure. Therefore, it is not possible to suggest that Goto includes such a teaching of an associative relationship as the Applicants have claimed. Clearly Goto includes no teaching that could be construed as anticipating this element of the Applicants. Therefore, because neither Goto, Belkhiter, nor Rebello disclose or teach each element of the invention they cannot render Applicant's claims unpatentable. Thus,

Claims 1, 23, 45, and 67 are allowable, the rejections are improper, and they should be withdrawn.

In view of the above discussion, Claims 3, 5, 7, 9, 11, 12-19, 21, 22, 25, 27, 29, 31, 33, 34-41, 43, 44, 47, 49, 51, 3, 55, 56-63, 65, 66, 69, 71, 73, 75, 77, 78-85, 87, 88 depend from Claims 1, 23, 45, and 67, respectively, whether directly or indirectly, and include all of the corresponding limitations thereof. Claims 1, 23, 45, and 67 are not taught by Goto, Belkhiter, or Rebello, therefore, Claims 3, 5, 7, 9, 11, 12-19, 21, 22, 25, 27, 29, 31, 33, 34-41, 43, 44, 47, 49, 51, 3, 55, 56-63, 65, 66, 69, 71, 73, 75, 77, 78-85, 87, 88 cannot be taught by Goto, Belkhiter, or Rebello either. Thus, Claims 3, 5, 7, 9, 11, 12-19, 21, 22, 25, 27, 29, 31, 33, 34-41, 43, 44, 47, 49, 51, 3, 55, 56-63, 65, 66, 69, 71, 73, 75, 77, 78-85, 87, 88 are allowable, the rejections are improper and they should be withdrawn.

Double Patenting

Claims 2, 46, and 68 stand rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1, 47, and 62 of prior U.S. Patent No. 6,775,581 to Landers. Applicants respectfully traverse. The Examiner states:

> "This is a double patenting rejection. The body of claims 2, 46, and 68 recite the same limitations as the body of claims 1, 47, and 62, of prior U.S. Patent No. 6,775,581 to Landers. Although the preamble of claims 2, 46, and 68 does not contain the term "modeling", the examiner believes that the term CAD in claims 2, 46, and 62 inherently includes modeling, and therefore the preamble of claims 2, 46, and 62 also recite the same limitations as the preamble of claims 1, 47, and 62 of prior U.S. Patent No. 6,775,581 to Landers."

Applicants appreciate the Examiners observations and respectfully suggest that the amendments to the Claims herein render the rejection moot.

Claims 1, 3-22, 45, 47-67, and 69-88 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 and 47-78 of U.S. Patent No. 6,775,581 to Landers. Applicants respectfully traverse. The Examiner states:

> "Although the conflicting claims are not identical, they are not patentably distinct from each other because Claim(s) 1, 3-22, 45, 47-67, and 69-88 are generally broader than claims 1-21 and 47-78 in U. S. Patent No. 6,775,581 to Landers. Broader claims in a later application constitute

obvious double patenting of narrow claims in an issued patent. See In re Van Ornum and Stang, 214, USPQ 761, 766, and 767 (CCPA) (The court sustained an obvious double patenting rejection of generic claims in a continuation application over narrower species claims in an issued patent); In re Vogel;164 USPQ 619, 622, and 623 (CCPA 1970) (Generic application claims specifying "meat" is obvious double patenting of narrow patent claims specifying "pork")."

Applicants appreciate the Examiners observations and respectfully suggest that the amendments to the Claims herein render the rejection moot.

Claim 24 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 38 and 42 of U.S. Patent No. 6,775,581 to Landers in view of U.S. Pat. No. 4,928,221 to Belkhiter. Applicants respectfully traverse. The Examiner states:

"Claim 38 of U.S. Patent No. 6,775,581 to Landers recite all of the limitations of claim 24 of the instant application, however fail to recite the limitations of generating a product drawing of said actual part."

"Claim 42 of U.S Patent No. 6,775,581 to Landers recite all of the limitations of claim 24 of the instant application, however fail to recite the limitations of generating machining instructions to create said actual part by machining said manufacturing feature into said blank."

"However, Belkhiter clearly teaches analogous art, wherein a conventional CAD/CAM system is used to produce a part drawing (Col. 2, lines 53-66 of '221) and then generating machining instructions to create said actual part by machining manufacturing features into a blank (See Cols. 7-8, table 2; Col. 1, lines 6-14 of '221)."

"Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the teachings of Landers with the teachings of Belkhiter.

"One of ordinary skill in the art would have been motivated to combine Rebello with Gadh because Belkhiter teaches a part program suitable for machining a part from a drawing without the need for human intervention. Furthermore, Belkhiter teaches a system that reduces lead-time between the request for a part and the machining of a part. Further still, Belkhiter teaches a system that reduces manpower costs (Col. 1, line 62— Col. 2, line 2 of '221)."

Applicants appreciate the Examiners observations and respectfully suggest that the amendments to the Claims herein render the rejection moot.

The arguments and amendments presented herein are made for the purposes of better defining the invention, rather than to overcome the rejections for patentability. The claims have not been amended to overcome the prior art and therefore, no presumption should attach that either the claims have been narrowed over those earlier presented, or that subject matter or equivalents thereof to which the Applicants are entitled has been surrendered. Allowance of the claims is respectfully requested in view of the above remarks. Moreover, no amendments as presented alter the scope of the claimed invention and therefore cannot necessitate a new grounds rejection.

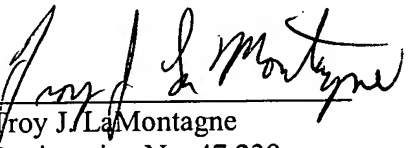
It is believed that the foregoing remarks are fully responsive to the Office Action and that the claims herein should be allowable to the Applicants.

In the event the Examiner has any queries regarding the instantly submitted response, the undersigned respectfully requests the courtesy of a telephone conference to discuss any matters in need of attention.

If there are additional charges with respect to this matter or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully Submitted,

CANTOR COLBURN LLP

By 

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Date: January 05, 2005